UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,223	03/25/2004	Manoj Kumar Singhal	15465US01	6554

23446 7590 08/09/2007

MCANDREWS HELD & MALLOY, LTD
500 WEST MADISON STREET
SUITE 3400
CHICAGO, IL 60661

EXAMINER	
HOLDER, ANNER N	

ART UNIT	PAPER NUMBER
2621	

MAIL DATE	DELIVERY MODE
08/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/809,223	SINGHAL, MANOJ KUMAR	
	Examiner	Art Unit	
	Anner Holder	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☒ Claim(s) *6,10, 16, 19, and 21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 6, 10, 16, 19, 21 are objected to because of the following informalities: "media" should be changed to "medium". Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Ritchey US 5,495,576.

4. As to claim 1, Ritchey teaches a method of broadcasting multidimensional virtual reality audio and visual information, [Abstract; Fig. 17; Col. 13 Lines 2-4; Col. 21 Lines 33-58] the method comprising: acquiring audio and visual information from a plurality of acquisition angles in a three dimensional space; [Fig. 1; Figs. 6-7; Figs. 15-18; Fig. 20; Fig. 24; Abstract; Col. 7 Lines 43-47; Col. 8 Lines 25-44; Col. 9 Lines 46-58; Col. 10 Lines 9-30; Col. 11 Line 31 – Col. 12 Line 19; Col. 12 Line 60 – Col. 13 Line 2] processing the acquired audio and visual information for transmission; [Abstract; Fig. 1; Figs. 6-7; Figs. 15-18; Fig. 20; Fig. 24; Col. 7 Line 55 – Col. 8 Line 25; Col. 9 Lines 46-58; Col. 10 Lines 9-30; Col. 15 Lines 49-50; Col. 16 Lines 10-44] receiving the processed audio and visual information; [Figs. 15-22; Abstract; Col. 16 Lines 10-44; Col 17 Lines 40-51; Col. 20 Lines 46-56; Col. 21 Lines 28-37, 47-58; Col 28 Lines 38-49] and projecting the audio and visual information in a multidimensional virtual form

from a plurality of projections angles in three dimensional space. [Fig. 19;Col. 30-51; Col. 34 Line 46 – Col. 35 Line 15]

5. As to claim 2, Ritchey teaches storing the audio and visual information; [Fig. 1 (25a, 25b); Col. 8 Lines 13-17] communicating the audio and visual information via a communication network; [Fig. 1 (20); Figs. 15-23; Col. 17 Line 52 – Col. 18 Line 50] acquiring sound information surrounding and emanating from a subject from a plurality of angles around the subject; [Fig. 1(8); Figs. 2-7; Figs. 15-16; Col. 8 Lines 25-43; Col. 10 Lines 40-46; Col. 12 Lines 20-32, 52-54, 59-67; Col. 13 Lines 62-67] acquiring visual information surrounding and emanating from the subject, wherein visual information comprises visual features of an entirety of an exterior surface of a subject are acquired multidimensionally; [Fig. 1; Figs. 6-7; Fig 14; Abstract; Col. 10 Lines 40-46; Col. 12 Lines 20-32, 52-54, 59-67; Col. 13 Lines 62-67] and producing a multidimensional surrounding visual representation and a multidimensional surrounding audio representation of a projected subject, wherein the projected subject is identical to a subject from which audio and visual information was previously acquired. [Abstract; Fig. 1; Figs. 15-22; Col. 21 Line 28-58; Col. 22 Lines 26-49; Col. 25 Lines 12-67; Col. 29 Lines 28-31]

6. As to claim 3, Ritchey teaches processing the audio and visual information further comprises: projecting holographic information [Fig. 1; Abstract; Col. 8 Line 50] from a plurality of holographic projector units interact to form a multidimensional virtual reality region through at least one of light propagation, light cancellation, constructive interference, and destructive interference, from a plurality of angles simultaneously; [Figs. 6-7; Fig. 14; Figs. 18-19; Col. 20 Lines 54-56; Col. 28 Line 62 – Col. 29 Line 9; Col. 30 Lines 29-51] and focusing and projecting holographic information to a zone of projection, wherein holographic projection units project

holographic information to a location corresponding to an identical location where visual information was captured, creating a multidimensional virtual reality representation of the subject. [Col. 30 Lines 43-51]

7. As to claim 4, Ritchey teaches processing the audio and visual information further comprises at least one of encoding, decoding, compressing, and decompressing the audio and visual information, and wherein processing further comprises audio encoding and decoding and visual encoding and decoding, wherein audio encoding and decoding comprises MPEG 1 level 3 processes and visual encoding and decoding comprises MPEG 2 decoding processes. [Fig. 20; Col. 12 Lines 11-16; Col. 13 Lines 2-23; Col. 32 Lines 37-44; Col. 33 Lines 49-52; MPEG is the standard for video compression]

8. As to claim 5, Ritchey teaches a method of acquiring multidimensional audio and visual (A/V) information, the method comprising acquiring A/V information from a multidimensional acquisition zone, [Fig. 1; Figs. 6-7; Figs. 14-18; Fig. 20; Fig. 24; Abstract; Col. 7 Lines 43-47, 60-65; Col. 8 Lines 25-44; Col. 9 Lines 46-58; Col. 10 Lines 9-30; Col. 11 Line 31 – Col. 12 Line 19; Col. 12 Line 60 – Col. 13 Line 2] the multidimensional acquisition zone comprising a substantially continuous three dimensional field of capture, [Col. 7 Lines 60-65; Col. 13 Lines 34-41; Col. 9 Lines 1-4; Col. 8 Lines 34-36] wherein acquiring A/V information further comprises capturing A/V information from a plurality of angles at discrete positions in three dimensional space. [Figs. 6-14; Figs. 18-19; Col. 20 Lines 54-56; Col. 28 Line 62 – Col. 29 Line 9; Col. 30 Lines 29-51; Col. 30 Lines 43-51]

9. As to claim 6, Ritchey teaches processing the captured A/V information for transmission, wherein processing the captured A/V information comprises at least one of encoding and

compressing the captured A/V information; [Figs. 1-7; Fig. 15-18; Fig. 24; Fig. 24; Col. 8 Lines 4-8, 41-43; Col. 9 Lines 46-56; Col. 12 Lines 11-19; Col. 13 Lines 17-23; Col. 21 Lines 28-37; Col. 28 Lines 38-49; Col. 32 Lines 37-44] communicating the A/V information via at least one communication network; storing the captured A/V information in at least one of a plurality of storage media devices; [Fig. 1; Col. 7 Line 55- Col. 8 Line 25; Col. 16 Lines 6-9] acquiring A/V information surrounding and emanating from the subject via a plurality of A/V receiver units in the A/V capture chamber, [Abstract; Fig. 1; Figs. 15-22; Col. 21 Line 28-58; Col. 22 Lines 26-49; Col. 25 Lines 12-67; Col. 29 Lines 28-31] the A/V receiver units comprise at least one of a visual capture device and an audio capture device, the visual capture device comprises at least one video camera and the audio capture device comprises at least one microphone, the audio capture device and the visual capture device are at least one of connected devices and separate devices; [Fig. 1- 17; Col. 7 Lines 31-55] deploying the plurality of A/V receiver units about an interior surface of the A/V capture chamber and acquiring the A/V information from a plurality of angles around the subject; [Fig. 1; Figs. 6-7; Figs. 14-18; Fig. 20; Fig. 24; Abstract; Col. 7 Lines 43-47, 60-65; Col. 8 Lines 25-44; Col. 9 Lines 46-58; Col. 10 Lines 9-30; Col. 11 Line 31 – Col. 12 Line 19; Col. 12 Line 60 – Col. 13 Line 2] focusing the A/V receiver units upon a capture acquisition region comprising a center of an interior of the A/V capture chamber, the A/V capture chamber has a shape comprising at least one of spherical, rectangular, square, and ovoid.; [Fig. 7; Figs. 19-25; Col. 1 Lines 21-25; Col. 10Lines 31-55; Col. 32 Lines 1-2] and focusing each A/V receiver unit upon a portion of the capture acquisition region, and overlapping each adjacent A/V receiver unit acquisition region at least partially, and acquiring A/V information from each A/V receiver unit's acquisition region and overlapping portions of

adjacent A/V receiver units' acquisition regions. [Figs. 4-5; Col. 1 Lines 21-26, 64-65; Col. 10 Lines 17-30; Col. 11 Lines 31-36]

10. As to claim 7, Ritchey teaches processing captured audio and visual information further comprises encoding the audio information and encoding the visual information, wherein encoding the audio information comprises applying MPEG 1 level 3 encoding processes to the audio information and encoding visual information comprises applying MPEG 2 visual encoding processes to the visual information. [Fig. 20; Col. 12 Lines 11-16; Col. 13 Lines 2-23; Col. 32 Lines 37-44; Col. 33 Lines 49-52; MPEG is the standard for video compression]

11. As to claim 8, Ritchey teaches further comprising combining additional ancillary A/V information with the acquired A/V information, wherein the additional ancillary A/V information comprises at least one of music, graphs, pictures, tables, documents, and backgrounds. [Col. 10 Lines 32-53]

12. As to claim 9, Ritchey teaches A method of displaying and projecting multidimensional audio and visual (A/V) information, the method comprising: projecting A/V information into a multidimensional display region, the multidimensional display region comprising a uniform field of focused projection, [Abstract; Fig. 17; Col. 13 Lines 2-4; Col. 21 Lines 33-58] wherein displaying A/V information further comprises projecting A/V information from a plurality of discrete projection angles located at a plurality of locations in three dimensional space; [Fig. 1; Figs. 6-7; Figs. 15-18; Fig. 20; Fig. 24; Abstract; Col. 7 Lines 43-47; Col. 8 Lines 25-44; Col. 9 Lines 46-58; Col. 10 Lines 9-30; Col. 11 Line 31 – Col. 12 Line 19; Col. 12 Line 60 – Col. 13 Line 2] processing received A/V information, wherein processing received A/V information comprises at least one of decompressing and decoding A/V information, wherein processing A/V

information further comprises audio decoding and video decoding, wherein audio decoding comprises MPEG 1 level 3 decoding processes and video decoding comprises MPEG 2 decoding processes; Fig. 20; Col. 12 Lines 11-16; Col. 13 Lines 2-23; Col. 32 Lines 37-44; Col. 33 Lines 49-52; MPEG is the standard for video compression] projecting the A/V information in a multidimensional virtual form into a corresponding multidimensional projection zone; Fig. 19; Col. 30-51; Col. 34 Line 46 – Col. 35 Line 15; Abstract; Fig. 17; Col. 13 Lines 2-4; Col. 21 Lines 33-58] storing A/V information in a plurality of storage media devices; [Fig. 1; Col. 7 Line 55- Col. 8 Line 25; Col. 16 Lines 6-9] and receiving A/V information from at least one communication network. [Fig. 1 (20); Figs. 15-23; Col. 17 Line 52 – Col. 18 Line 50]

13. As to claim 10, Ritchey teaches displaying the A/V information comprises using an A/V display chamber, wherein the A/V display chamber has a shape comprising at least one of spherical, rectangular, square, and ovoid, and wherein the A/V display chamber is selected from one of a room and a stage. [Fig. 7; Figs. 19-25; Col. 1 Lines 21-25; Col. 10Lines 31-55; Col. 32 Lines 1-2]

14. As to claim 11, Ritchey teaches processing visual information, wherein processing visual information further comprises at least one of enabling a video display engine to transform the visual information into a video output signal and enabling a holographic display engine to transform the visual information to a holographic output signal; transmitting one of the video output signal to a video projection unit and the holographic output signal to a holographic projection unit; processing audio information and transmitting the audio information via an audio output signal to an audio projection unit; and receiving and projecting one of a combined holographic and audio output signal, a combined video and audio output signal, a separate

holographic output signal and audio output signal, and a separate video output signal and audio output signal received from one of the A/V decoding system and a storage system. [Fig. 1; Abstract; Col. 8 Line 50; Figs. 6-7; Fig. 14; Figs. 18-19; Col. 20 Lines 54-56; Col. 28 Line 62 – Col. 29 Line 9; Col. 30 Lines 29-51]

15. As to claim 12, Ritchey teaches receiving and projecting the audio and visual information is performed by a plurality of video projection units for projecting and displaying the video output signal and a plurality of audio projection units for projecting the audio output signal, wherein a plurality of A/V display units are distributed around an interior surface of an A/V display chamber. [Fig. 14; Fig. 19; Fig. 23; Abstract; Fig. 17; Col. 13 Lines 2-4; Col. 21 Lines 33-58; Col. 7 Lines 43-47; Col. 8 Lines 25-44; Col. 9 Lines 46-58; Col. 10 Lines 9-30; Col. 11 Line 31 – Col. 12 Line 19; Col. 12 Line 60 – Col. 13 Line 2]

16. As to claim 13, Ritchey teaches further comprising focusing and directing audio information and projected holographic information upon a center region of the A/V display chamber producing a multidimensional surrounding visual and multidimensional surrounding audio representation of a projected subject. [Abstract; Col. 30 Line 29 – Col. 32 Line 20]

17. As to claim 14, Ritchey teaches projecting holographic information from a plurality of holographic projector units forming a multidimensional virtual reality region through at least one of light propagation, light cancellation, constructive interference, and destructive interference, arriving from a plurality of angles around an entirety of the A/V display chamber simultaneously; [Figs. 6-7; Fig. 14; Figs. 18-19; Col. 20 Lines 54-56; Col. 28 Line 62 – Col. 29 Line 9; Col. 30 Lines 29-51] focusing and projecting the holographic information from a plurality of discrete angles and overlapping zones of projection; [Col.30 Lines 29-51] projecting

holographic information to the zone of projection via a plurality of holographic projection units, wherein the holographic projection units project holographic information to a location creating a multi-dimensional virtual reality representation of a subject; [Abstract; Col. 30 Lines 29-51] and playing received audio information via a plurality of audio playback units, each of the audio playback units comprising at least one speaker, the audio playback units focusing and projecting audio information to create a multidimensional virtual audio representation of a subject's sound information and speech. [Col. 7 Lines 43-49; Col. 8 Lines 26-44; Fig. 17; Fig. 1; Fig. 5; Col. 20 Lines 10-31]

18. As to claim 15, Ritchey teaches A multidimensional virtual reality audio and visual (A/V) system comprising: A/V capture system for acquiring audio and visual information from a multidimensional acquisition zone; [Fig. 1; Figs. 6-7; Figs. 15-18; Fig. 20; Fig. 24; Abstract; Col. 7 Lines 43-47; Col. 8 Lines 25-44; Col. 9 Lines 46-58; Col. 10 Lines 9-30; Col. 11 Line 31 – Col. 12 Line 19; Col. 12 Line 60 – Col. 13 Line 2] and A/V encoding system, the A/V encoding system processing the acquired A/V information for transmission. [Fig. 20; Col. 12 Lines 11-16; Col. 13 Lines 2-23; Col. 32 Lines 37-44; Col. 33 Lines 49-52]

19. As to claim 16, Ritchey teaches a plurality of storage media devices for storing A/V information comprising at least one of a stationary storage device and a mobile storage device; [Fig. 1; Col. 7 Line 55- Col. 8 Line 25; Col. 16 Lines 6-9; Col. 14 Lines 63-66] and the system being communicatively coupled to at least one communication network, and wherein A/V information is communicated between one of the A/V encoding system and at least one of a plurality of storage media devices for storing audio and visual information, [Fig. 1; Col. 7 Line 30 – Col. 8 Line 25] the A/V information captured by the A/V capture system is at least one of

encoded and compressed by the A/V encoding system, [Fig. 20; Col. 12 Lines 11-16; Col. 13 Lines 2-23; Col. 32 Lines 37-44; Col. 33 Lines 49-52] the A/V capture system comprises an A/V capture chamber, the A/V capture chamber has a shape comprising at least one of spherical, rectangular, square, and ovoid, the A/V capture chamber is adapted to acquire sound information surrounding and emanating from a subject and visual information surrounding and emanating from the subject via a plurality of A/V receiver units, the plurality of A/V receiver units are deployed about an interior surface of the A/V capture chamber to acquire sound and visual information from all possible angles around the subject, the A/V receiver units are focused upon a capture acquisition region comprising a center of an interior of the A/V capture chamber. [Fig. 1; Figs. 4-7; Figs. 15-18; Fig. 20; Fig. 24; Abstract; Col. 7 Lines 43-47; Col. 8 Lines 25-44; Col. 9 Lines 46-58; Col. 10 Lines 9-30; Col. 11 Line 31 – Col. 12 Line 19; Col. 12 Line 60 – Col. 13 Line 2]

20. As to claim 17, Ritchey teaches wherein each A/V receiver unit is focused upon a portion of the capture acquisition region, and each A/V receiver unit is arranged to acquire A/V information from an A/V receiver unit's acquisition region and a region at least partially overlapping adjacent A/V receiver units' acquisition regions, [Figs. 4-5; Col. 1 Lines 21-26, 64-65; Col. 10 Lines 17-30; Col. 11 Lines 31-36] the A/V receiver units comprise at least one of a video capture device and an audio capture device, the audio capture device and the video capture device are at least one of connected devices and separate devices, the video capture device comprises at least one video camera and the audio capture device comprises at least on microphone, [Col. 7 Lines 30-54; Col. 10 Lines 2-16] wherein visual features of an entirety of an exterior surfaces of a subject are captured by the plurality of A/V receiver units in combination

multidimensionally, and audio information emanating from the subject are captured by the plurality of A/V receiver units in combination multidimensionally, additional A/V information is combined with the acquired A/V information from the A/V receiver units, wherein the additional A/V information comprises at least one of music, graphs, pictures, tables, documents, and backgrounds, [Col. 10 Lines 32-53] the A/V encoding system processing received audio and visual information further comprises audio encoding and video encoding, wherein audio encoding comprises MPEG 1 level 3 encoding processes and video encoding comprises MPEG 2 decoding processes. [Fig. 20; Col. 12 Lines 11-16; Col. 13 Lines 2-23; Col. 32 Lines 37-44; Col. 33 Lines 49-52; MPEG is the standard for video compression]

21. As to claim 18, Ritchey teaches A multidimensional virtual reality audio and visual (A/V) system comprising: an A/V decoding system, the A/V decoding system processing received audio and visual information; and an A/V display system, the A/V display system projecting the audio and visual information in a multidimensional virtual form in a corresponding multidimensional projection zone. [Fig. 20; Col. 12 Lines 11-16; Col. 13 Lines 2-23; Col. 32 Lines 37-44; Col. 33 Lines 49-52]

22. As to claim 19, Ritchey teaches a plurality of storage media devices for storing audio and visual information, the storage media devices for storing audio and visual information comprise at least one of a stationary storage device and a mobile storage device, the A/V system being communicatively coupled to at least one communication network, and A/V information being communicated between one of the A/V decoding system [Fig. 20; Col. 12 Lines 11-16; Col. 13 Lines 2-23; Col. 32 Lines 37-44; Col. 33 Lines 49-52] and at least one of the plurality of storage media devices for storing A/V information, the A/V decoding system comprising audio decoding

and video decoding, the audio decoding comprising MPEG 1 level 3 decoding and the video decoding comprising MPEG 2 decoding, the A/V decoding system [Fig. 20; Col. 12 Lines 11-16; Col. 13 Lines 2-23; Col. 32 Lines 37-44; Col. 33 Lines 49-52; MPEG is the standard for video compression] further comprising a video display engine transforming the visual information to a video output signal, the video output signal being transmitted to a video projection unit, [Fig. 1; Figs. 15-25; Abstract; Fig. 17; Col. 13 Lines 2-4; Col. 21 Lines 33-58] the A/V decoding system further comprising enabling a holographic display engine transforming the visual information to a holographic output signal, the holographic output signal being transmitted to a holographic projection unit, the A/V decoding system further comprising audio information transmitted via an audio output signal, the audio output signal being transmitted to an audio projection unit, the audio output signal and one of a video output signal and a holographic output signal being transmitted one of combined together and separately, the A/V display system being adapted to receive one of a combined holographic and audio output signal, a combined video and audio output signal, a separate holographic and audio output signals, [Fig. 1; Abstract; Col. 8 Line 50; Col. 30 Lines 43-51] and a separate video and audio output signals from one of the A/V decoding system [Fig. 20; Col. 12 Lines 11-16; Col. 13 Lines 2-23; Col. 32 Lines 37-44; Col. 33 Lines 49-52] and a media storage device, [Fig. 1; Col. 7 Line 55- Col. 8 Line 25; Col. 16 Lines 6-9] the A/V display system comprising an A/V display chamber, the A/V display chamber having a shape comprising one of spherical, rectangular, square, and ovoid, and the A/V display chamber further comprising one of a room and a stage, [Fig. 7; Figs. 19-25; Col. 1 Lines 21-25; Col. 10Lines 31-55; Col. 32 Lines 1-2] the A/V display chamber comprising a plurality of video projection units for projecting the video output signal and a plurality of audio projection units for

projecting the audio output signal, the A/V display chamber comprising a plurality of A/V display units distributed around an interior surface of the A/V display chamber, the audio information and the holographic information being directed and focused upon a center region of the A/V display chamber producing a multidimensional surrounding visual and multidimensional surrounding audio representation of a projected subject, the projected subject being identical to a subject from which the A/V information was captured in an A/V capture chamber, the projected holographic information from a plurality of holographic projector units interact forming a multidimensional virtual reality region through at least one of light propagation, light cancellation, constructive interference, and destructive interference, arriving from a plurality of angles around an entirety of an interior of the A/V display chamber simultaneously, [Figs. 6-7; Fig. 14; Figs. 18-19; Col. 20 Lines 54-56; Col. 28 Line 62 – Col. 29 Line 9; Col. 30 Lines 29-51] the projected holographic information being focused and projected from a plurality of angles and zones of projection, the A/V display unit comprising a plurality of holographic projection units projecting holographic information to the zone of projection, wherein the holographic projection units project holographic information creating a multidimensional virtual reality representation of the subject, [Fig. 1; Figs. 6-7; Fig. 14; Figs. 18-19; Col. 20 Lines 54-56; Col. 28 Line 62 – Col. 29 Line 9; Col. 30 Lines 29-51] the A/V display unit comprising a plurality of audio playback units, the audio playback units comprising at least one speaker, the audio playback units projecting audio information to create a multi-dimensional virtual audio representation of a subject's sound information and speech. [Col. 7 Lines 43-49; Col. 8 Lines 26-44; Fig. 17; Fig. 1; Fig. 5; Col. 20 Lines 10-31]

23. As to claim 20, Ritchey teaches A multidimensional virtual reality audio and visual (A/V) system comprising: an A/V capture system for acquiring audio and visual information from a multidimensional acquisition zone; [Fig. 1; Figs. 6-7; Figs. 15-18; Fig. 20; Fig. 24; Abstract; Col. 7 Lines 43-47; Col. 8 Lines 25-44; Col. 9 Lines 46-58; Col. 10 Lines 9-30; Col. 11 Line 31 – Col. 12 Line 19; Col. 12 Line 60 – Col. 13 Line 2] an A/V encoding system, the A/V encoding system processing the acquired A/V information for transmission. [Fig. 20; Col. 12 Lines 11-16; Col. 13 Lines 2-23; Col. 32 Lines 37-44; Col. 33 Lines 49-52] an A/V decoding system, the A/V decoding system processing received audio and visual information; and an A/V display system, the A/V display system projecting the audio and visual information in a multidimensional virtual form to a corresponding multidimensional projection zone. [Fig. 20; Col. 12 Lines 11-16; Col. 13 Lines 2-23; Col. 32 Lines 37-44; Col. 33 Lines 49-52]

24. As to claim 21, Ritchey teaches a plurality of storage media devices for storing audio and visual information the storage media devices for storing audio and visual information comprising at least one of a stationary storage device and a mobile storage device, the A/V system being communicatively coupled to at least one communication network, the A/V information being communicated between one of the A/V encoding system, the A/V decoding system, and at least one of a plurality of storage media devices for storing audio and visual information, the A/V capture system and the A/V display system being one of located at different geographic locations and co-located at a plurality of different geographic locations, additional A/V information is combined with acquired A/V information from the A/V receiver units, the additional A/V information comprises at least one of music, graphs, pictures, tables, documents, and backgrounds, [Col. 10 Lines 32-53] the A/V decoding system processing received A/V

information further comprises audio decoding and video decoding, the audio decoding comprising MPEG 1 level 3 decoding processes and the video decoding comprising MPEG 2 decoding processes, [Fig. 20; Col. 12 Lines 11-16; Col. 13 Lines 2-23; Col. 32 Lines 37-44; Col. 33 Lines 49-52; MPEG is the standard for video compression] the A/V decoding system further comprising a video display engine transforming the visual information into a video output signal, the video output signal being transmitted to a video projection unit, the A/V decoding system further comprising a holographic display engine transforming the visual information into a holographic output signal, the holographic output signal being transmitted to a holographic projection unit, the A/V decoding system further comprising transforming the received audio information into an audio output signal and transmitting the audio output signal via at least one communications network, the audio output signal being transmitted to an audio projection unit, the audio output signal and one of a video output signal and a holographic output signal being transmitted one of combined together and separately, the A/V display system receiving one of a combined holographic and audio output signal, a combined video and audio output signal, a separate holographic and audio output signal, and a separate video and audio output signal from one of the A/V decoding system [Fig. 1; Figs. 6-7; Fig. 14; Figs. 18-19; Col. 20 Lines 54-56; Col. 28 Line 62 – Col. 29 Line 9; Col. 30 Lines 29-51] and a media storage device, [Fig. 1; Col. 7 Line 55- Col. 8 Line 25; Col. 16 Lines 6-9] the A/V display system comprising an A/V display chamber, the A/V display chamber having a shape comprising one of spherical, rectangular, square, and ovoid, [Fig. 7; Figs. 19-25; Col. 1 Lines 21-25; Col. 10Lines 31-55; Col. 32 Lines 1-2] and the A/V display chamber further comprises one of a room and a stage, the A/V display chamber comprising a plurality of video projection units for projecting the video output signal

and a plurality of audio projection units for projecting the audio output signal, the A/V display chamber comprising a plurality of A/V display units distributed around an interior surface of the A/V display chamber, audio information and holographic information being directed and focused upon a center region of the A/V display chamber producing a multidimensional surrounding visual representation and a multidimensional surrounding audio representation of a projected subject, the projected subject being identical to a subject from which the A/V information was previously captured in an A/V capture chamber, projected holographic information from a plurality of holographic projector units interact forming a multidimensional virtual reality region through at least one of light propagation, light cancellation, constructive interference, and destructive interference, arriving from a plurality of angles around an entirety of the A/V display chamber simultaneously, [Figs. 6-7; Fig. 14; Figs. 18-19; Col. 20 Lines 54-56; Col. 28 Line 62 – Col. 29 Line 9; Col. 30 Lines 29-51] the projected holographic information being focused and projected from a plurality of angles and zones of projection identically as acquired A/V information that was captured from respective corresponding angles and zones of acquisition by the A/V receiving units of the A/V capture chamber, the A/V display unit comprising a plurality of holographic projection units projecting holographic information to the zone of projection, the holographic projection units project holographic information to a location corresponding to an identical location in the A/V capture chamber where visual information was captured, and creating a multidimensional virtual reality representation of the subject, [Fig. 1; Figs. 6-7; Fig. 14; Figs. 18-19; Col. 20 Lines 54-56; Col. 28 Line 62 – Col. 29 Line 9; Col. 30 Lines 29-51] the A/V display unit comprising a plurality of audio playback units, the audio playback units comprising at least one speaker, the audio playback units projecting audio information to an

identical location in the A/V display chamber where the corresponding audio information was acquired in the A/V capture chamber, the plurality of audio playback units being focused to project audio information creating a multidimensional virtual audio representation of a subject's sound information and speech. [Col. 7 Lines 43-49; Col. 8 Lines 26-44; Fig. 17; Fig. 1; Fig. 5; Col. 20 Lines 10-31]

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anner Holder whose telephone number is 571-270-1549. The examiner can normally be reached on M-Th, M-F 8 am - 3 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ANH 08/06/07

Mehrdad Dastouri
MEHRDAD DASTOURI
SUPERVISORY PATENT EXAMINER
TC 2600